

MULTIMEDIA



UNIVERSITY

STUDENT ID NO

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MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2015/2016

BFM1014 – FUNDAMENTALS OF FINANCE
(All sections / Groups)

16 OCTOBER 2015
3.00 PM – 5.00 PM
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This question paper consists of six pages.
2. Attempt only **FOUR (4)** out of **FIVE (5)** questions. All questions carry equal marks and the distribution of the marks for each question is given.
4. All answer should be written on the Answer Booklet provided.

Attempt FOUR (4) out of FIVE (5) questions. All questions carry equal marks and the distribution of the marks for each question is given.

QUESTION 1

- a. You have been given a choice between two retirement policies as described below.

Policy A: You will receive equal annual payments of RM 10,000 beginning 35 years from now for 10 years.

Policy B: You will receive one lump-sum of RM 100,000 in 40 years from now.

Which policy would you choose? Assume rate of interest is 6 percent.

(7 marks)

- b. Suzanne has identified a project with the following cash flows. What is the present value of the cash flows at time 0 if the interest rate is 9%?

Year	Cash Flow
1	RM 2,000
2	RM 650
3	RM 375
4	RM 1,200

(8 marks)

- c. Joe expects to start working immediately after graduation and he is already planning for his retirement. He wants to retire in twenty-five years and hopes that he will be able to do so comfortably by investing RM 2,000 at the end of each year throughout this period. If he earns 5% compounded annually, how much will be in his retirement fund in twenty-five years?

(5 marks)

- d. You are 30 years old and you want to retire at age 60 with RM 1.5 million. You are going to make equal annual deposits into your savings account at the end of each year in order to save up this money. Your savings account pays 8% interest. What amount must you deposit each year?

(5 marks)

[TOTAL 25 MARKS]

Continued...

QUESTION 2

- a. What is the definition of an APR?
What is effective annual rate?
Which rate should you use to compare alternative investments or loans? (6 marks)
- b. The bonds of Vandalay Inc. pay annual coupons at the rate of 7%. They mature in 15 years with a face value of RM 1,000. What is their price if their yield is 6%? (5 marks)
- c. Versalife Inc. just paid a dividend of RM 1.32 on its common stock, and the next dividend will be paid one year from now. You require a return of 6%. What is the market price of this stock if there is no growth in annual dividends? (3 marks)
- d. Natalie is interested in valuing the shares of Union Aerospace (UA). UA pays dividends annually. She expects the stock to pay dividends of RM 3 at the end of each of the next four years. Thereafter, she expects the dividend to grow at 7% per annum in perpetuity. If her required return is 12%, then how much should she pay for a share? (8 marks)
- e. The Bradshaw Company's most recent dividend was RM 6.75. The historical dividend payment by the company shows a constant growth rate of 5 percent per year. What is the maximum you would be willing to pay for a share of its common stock if your required rate of return is 8 percent? (3 marks)

[TOTAL 25 MARKS]

Continued...

QUESTION 3

- a. Sara Flea Collar Inc. is evaluating an overseas expansion that will cost RM 1 million and is expected to generate the following cash flows:

Year	Cash Flow
1	- RM 250,000
2	RM 450,000
3	RM 550,000
4	RM 800,000

What is the payback period?

(7 marks)

- b. Two projects being considered by Thomas and Friends Corporation are mutually exclusive and have the following projected cash flows with the required return of 10%.

Year	Project A	Project B
0	-RM 50,000	-RM 50,000
1	RM 15,625	0
2	RM 15,625	0
3	RM 15,625	0
4	RM 15,625	0
5	RM 15,625	RM 99,500

- i. What is the Net Present Value for each project?

(8 marks)

- ii. What is the Probability Index for each project?

(4 marks)

- iii. Based on your evaluation, which project should the company invest? Why?

(2 marks)

- c. Define financial leverage. How does financial leverage effect ROE and EPS?

(4 marks)

[TOTAL 25 MARKS]

Continued...

QUESTION 4

- a. Why do we use an after tax figure for cost of debt but not for cost of equity?
(2 marks)
- b. Peter's Audio Shop has a cost of debt of 7 percent, a cost of equity of 11 percent, and a cost of preferred stock of 8 percent. The firm has 104,000 shares of common stock outstanding at a market price of RM 20 a share. There are 40,000 shares of preferred stock outstanding at a market price of RM 34 a share. The bond issue has a total face value of RM 500,000 and sells at 102 percent of face value. The company's tax rate is 34 percent. What is the weighted average cost of capital for Peter's Audio Shop?
(10 marks)
- c. What are dividends? Dividends come in several forms. What are the four (4) types of cash dividends?
(4 marks)
- d. Describe the cash conversion cycle, its funding requirements, and the key strategies for managing it.
(9 marks)

[TOTAL 25 MARKS]

Continued...

QUESTION 5

- a. Manfred Manufacturing is involved in the production of machine parts. The company uses 600,000 pounds of steel annually. The current purchasing cost for steel is RM 3.20 per pound. The carrying cost for inventory is 10 percent of the purchase price. The cost of ordering steel is RM 800 per order. The company has decided to maintain a safety stock of 15,000 pounds. The delivery time per order is 6 days. The company works 365 days a year.
- i. Determine the optimal EOQ. (2 marks)
 - ii. How many orders will be placed annually? (2 marks)
 - iii. What is the average inventory? (2 marks)
 - iv. What is the inventory order point? (That is, at what level of inventory should a new order be placed?) (2 marks)
 - v. What is the company's total inventory costs for the year? (3 marks)
- b. A company has an account receivable collection period of 37.5 days, an inventory period of 93.4 days, and an account payables turnover of 48.12. Calculate the cash conversion cycle. (9 marks)
- c. Can a firm have a negative cash cycle? If yes, explain how that can occur and discuss whether or not that would be good for a firm. If no, explain why that cannot occur and why preventing it from occurring is good for a firm. (5 marks)

[TOTAL 25 MARKS]

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APPENDIX

Future Value:

$$FV = PV(1 + r)^t$$

Annuities

$$PV = PMT \left[\frac{1 - \frac{1}{(1+r)^t}}{r} \right]$$

$$FV = PMT \left[\frac{(1+r)^t - 1}{r} \right]$$

Perpetuity: $PV = PMT / r$

EAR & APR

$$EAR = \left[1 + \frac{APR}{m} \right]^m - 1$$

$$APR = m \left[(1 + EAR)^{\frac{1}{m}} - 1 \right]$$

Bond Pricing

$$\text{Bond Value} = C \left[\frac{1 - \frac{1}{(1+YTM)^t}}{YTM} \right] + \frac{F}{(1+YTM)^t}$$

Stock Value

$$\hat{P}_0 = \sum_{t=1}^{\infty} \frac{D_t}{(1+R)^t}$$

Estimating Dividends

Zero growth: $P_0 = D / R$

Constant Growth Stock: $D_t = D_0(1+g)^t$

Dividend Growth Model:

$$\hat{P}_0 = \frac{D_0(1+g)}{R - g} = \frac{D_1}{R - g}$$

Nonconstant + Constant growth

$$\hat{P}_0 = \frac{D_1}{(1+R)^1} + \frac{D_2}{(1+R)^2} + \frac{D_3}{(1+R)^3} + \dots + \frac{D_\infty}{(1+R)^\infty}$$

Net Present Value

$$NPV = \sum_{t=0}^n \frac{CF_t}{(1+R)^t} - CF_0$$

Cost of equity

$$R_E = R_f + \beta_E (E(R_M) - R_f)$$

WACC

$$= E/V \times R_E + P/V \times R_P + D/V \times R_D (1 - T_c)$$

Operating cycle

$$= \text{inventory period} + \text{accounts receivable period}$$

Cash Cycle

$$= \text{Operating Cycle} - \text{Accounts payable period}$$

EOQ Model

$$Q^* = \sqrt{\frac{2TF}{CC}}$$

End of Page.

